

**We claim:**

1. An isolated nucleic acid molecule encoding an ABACP polypeptide, or a fragment of an ABACP polypeptide having ABACP polypeptide activity.
2. The molecule of claim 1, wherein the polypeptide catabolizes ABA.
- 5 3. The molecule of claim 2, wherein the polypeptide comprises a (+)-ABA 8'hydroxylase.
4. An isolated nucleic acid molecule encoding an ABACP polypeptide, a fragment of an ABACP polypeptide having ABACP activity, or a polypeptide having ABACP activity, comprising a nucleic acid molecule selected from the group consisting of:
  - 10 a) a nucleic acid molecule that hybridizes to a nucleic acid molecule consisting of [SEQ ID NO:1 or 2], or a complement thereof under low, moderate or high stringency hybridization conditions wherein the nucleic acid molecule encodes an ABACP polypeptide or a polypeptide having ABACP activity;
  - b) a nucleic acid molecule degenerate with respect to (a), wherein the nucleic  
 15 molecule encodes an ABACP polypeptide or a polypeptide having ABACP activity.
5. The nucleic acid molecule of claim 4, wherein the hybridization conditions comprise low stringency conditions of 1XSSC, 0.1% SDS at 50°C or high stringency conditions of 0.1XSSC, 0.1% SDS at 65°C.
6. An isolated nucleic acid molecule encoding an ABACP polypeptide, a fragment of  
 20 an ABACP polypeptide having ABACP activity, or a polypeptide having ABACP activity, comprising a nucleic acid molecule selected from the group consisting of:
  - a) the nucleic acid molecule of the coding strand shown in [SEQ ID NO:1 or 2], or a complement thereof;
  - b) a nucleic acid molecule encoding the same amino acid sequence as a nucleotide  
 25 sequence of (a); and
  - c) a nucleic acid molecule having at least 17% identity with the nucleotide sequence of (a) and which encodes an ABACP polypeptide or a polypeptide having ABACP activity.

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7. The nucleic acid molecule of claim 1, wherein the ABACP polypeptide comprises a (+)-ABA 8'hydroxylase polypeptide.

8. The nucleic acid molecule of claim 1, comprising all or part of a nucleotide sequence shown in [SEQ ID NO:1 or 2] or a complement thereof.

5 9. The nucleic acid molecule of claim 1, consisting of the nucleotide sequence shown in [SEQ ID NO:1 or 2] or a complement thereof.

10. The nucleic acid molecule of claim 1, wherein the molecule comprises genomic DNA, cDNA or RNA.

11. The nucleic acid molecule of claim 1, wherein the nucleic acid molecule is chemically synthesized.

12. The nucleic acid molecule of claim 1, comprising at least 30 consecutive nucleotides of [SEQ ID NO:1 or 2] or a complement thereof.

13. A host cell comprising the recombinant nucleic acid molecule of claim 1, or progeny of the host cell.

14. The host cell of claim 13, selected from the group consisting of a fungal cell, a yeast cell, a bacterial cell, a microorganism cell and a plant cell.

15. A plant, a plant part, a seed, a plant cell or progeny thereof comprising the nucleic acid molecule of claim 1.

16. The plant part of claim 15, comprising all or part of a leaf, a flower, a stem, a root or a tuber.

17. The plant, plant part, seed or plant cell of claim 15 wherein the plant, plant part, seed or plant cell is of a species selected from the group consisting of alfalfa, almond, apple, apricot, arabidopsis, artichoke, atriplex, avocado, barley, beet, birch, brassica, cabbage, cacao, cantalope, carnations, castorbean, cauliflower, celery, clover, coffee, corn, cotton, cucumber, garlic, grape, grapefruit, hemp, hops, lettuce, maple, melon, mustard, oak, oat, olive, onion, orange, pea, peach, pear, pepper, pine, plum, poplar, potato, prune, radish, rice, roses, rye, sorghum, soybean, spinach, squash, strawberries, sunflower, tobacco, tomato, wheat.

